

RECEIVED  
CENTRAL FAX CENTER

JAN 17 2006

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor: Michael W. Price, et al.

Attorney Docket No. SP02-174

Serial No: 10/629,397

Examiner: Ngoc Yen M. Nguyen

Filing Date: July 29, 2003

Group Art Unit: 1754

Title: Scatter-Free UV Optical  
Fluoride Crystal Elements for  
< 200NM Laser Lithography  
and Methods

## NOTICE OF APPEAL

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicant hereby appeal(s) to the Board of Appeals from the Office Action dated November 17, 2005 from the Primary Examiner finally rejecting claims 1 - 19.

Corning Incorporated hereby authorizes to charge deposit account 03-3325 in the amount of \$500.

If there are any other fees due in connection with the filing of this Notice of Appeal, please charge the fees to our Deposit Account No. 03-3325. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

17 January 2006  
DateRespectfully submitted,  
CORNING INCORPORATED

CERTIFICATE OF TRANSMISSION	
UNDER 37 C.F.R. § 1.8	
I hereby certify that this paper and any papers referred to herein are being transmitted by facsimile to the U.S. Patent and Trademark Office at 703-872-9306 on:	
<u>17 January 2006</u>	
<u>Walter M. Douglas</u>	<u>17 Jan 2006</u>
Walter M. Douglas	Date

Walter M. Douglas  
Walter M. Douglas  
Registration No. 34,510  
Corning Incorporated  
Patent Department  
Mail Stop SP-TI-03-1  
Corning, NY 14831

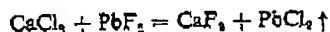
01/19/2006 STEUHEL1 00000003 033325 10629397

01 FC:1401 500.00 DA

912

## Letters to the Editor

calcium chloride considerable scatter was produced. The scatter could be suppressed by adding 100 parts per million of lead fluoride. In this case the chlorine could leave the melt possibly by the reaction



We have obtained a correlation between the chlorine content of synthetic calcium fluoride and the scatter in crystals grown from this material. Chlorine has been identified as an impurity in calcium tungstate crystals which also causes scatter (Cockayne 1965).

From these facts it will be seen that scatter can result from oxygen, chlorine and sulphur when present in concentrations which exceed the limit of solid solubility. When the crystal cools down the excess is precipitated as a second phase. The absence of scattering centres near to surface, grain boundaries and tilt boundaries suggests that the form of the precipitates is dependent on the vacancy concentration in the crystal. (Phillips and Hanlon 1963).

Physics Department,  
Royal Radar Establishment,  
Malvern, Worcs.

W. BARDSLEY  
G. W. GREEN  
21st April 1965

## References

- COCKAYNE, B., 1964, *Solid State Commun.*, 2, 381-2.  
COCKAYNE, B., ROBERTSON, D. S., and BARDSLEY, W., 1964, *Brit. J. Appl. Phys.*, 15, 1165-9.  
FORRESTER, P. A., GREEN, G. W., and SAMPSON, D. F., 1965, to be published.  
KAISER, W., and KECK, M. I., 1962, *J. Appl. Phys.*, 33, 762-4.  
PHILLIPS, W. L., Jr., and HANLON, J. E., 1963, *J. Amer. Ceram. Soc.*, 49, 447-9.  
STEPANOV, I. V., and FEOFLOV, P. P., 1956, *Growth of Crystals* (In English translation, Consultants Bureau Inc., New York, 1958).  
STOCKBARGER, D. C., 1949, *J. Opt. Soc. Amer.*, 39, 731-40.

## CORRIGENDA

The relationship between space-charge-limited current and total emission of diodes, by P. W. COUTTS and R. K. FITCH (*Brit. J. Appl. Phys.*, 1964, 15, 1327).

The temperature ranges given for the various points on the figure of this paper are incorrect. They should be as follows:

$$\blacksquare, 1105-1120^\circ\text{K}, \quad \bullet, 1090-1105^\circ\text{K}, \quad +, 1075-1090^\circ\text{K}.$$

The paper was written on the assumption that the points were indicated correctly and this error in no way affects the arguments presented.

Induced conduction in dielectric liquids, by I. ADAMCZEWSKI (*Brit. J. Appl. Phys.*, 1965, 16, 759).

Page 763, line 8: equation should read  $\log \mu_+ = A_1 - \frac{1}{2} \log \eta$ .  
line 23: range should be 100-1500 Å.

Page 766, 2 lines from bottom: range should be  $(7.2 - 12) \times 10^{-10}$  cm<sup>2</sup> per ion sec.

Page 767, line 12: equation should read  
 $\frac{1}{2} F_1 = -0.174 nkT + 0.0139 (5.05 + n).$

## References

- ADAMCZEWSKI, 1937b: Journal should be *Ann. Phys., Paris*.  
DAVIS *et al.*, 1962a: Pages 947 and 2470.